

# Safety Limit Switches Type: LSPS (Plastic Body)

## APPLICATIONS:

IDEM's extensive range of LSPS Safety Limit Switches have been designed to be mounted for position sensing of moving applications e.g. guard doors, conveyors, machine beds and elevators. They are available with linear plungers, rotary levers, roller plungers or spring levers and are available with either slow break or snap action contacts.



## FEATURES:

- Positive opening safety contact to EN60947-5-1
- High mechanical life over 5,000,000 cycles
- Enclosure protection to IP67 - suitable for washdown
- Extensive choice of 11 actuator heads - linear, rotary, roller or flexible actions
- Head position adjustment any of 4 positions
- Conduit entries available: M20, 1/2"NPT or Quick Connect option

## OPERATION:

Operation of LSPS Safety Limit Switches is achieved by a sliding actuation of the moving object to cause deflection of the switch plungers, rollers, levers or flexible actuators.

For safety applications it is important that the moving object does not pass completely over the switch actuators so as to either cause damage to the actuator or allow it to return to its original position.

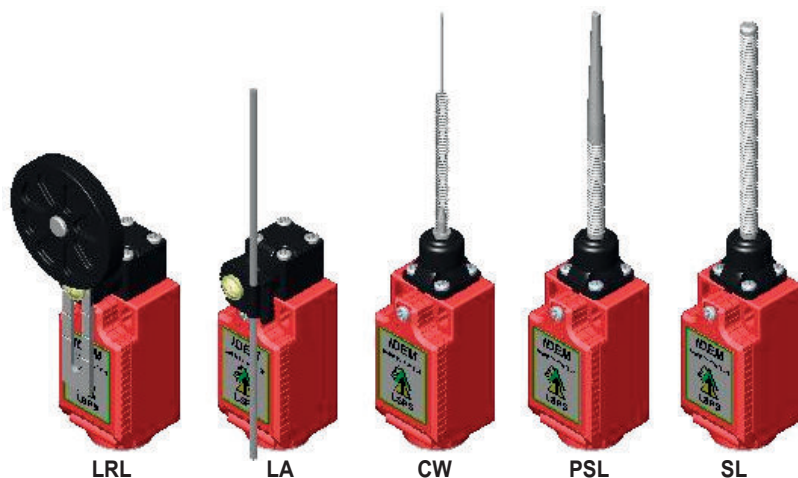


## CONTACT BLOCKS:

2NC	1NO	Slow Break
3NC		Slow Break
1NC	1NO	Snap Action

## CONDUIT ENTRY:

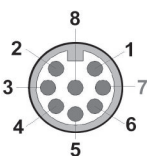
M	M20 version
N	1/2" NPT version
Q	Quick Connect version



## ACTUATOR TYPES:

PP	Pin Plunger
RP	Roller Plunger
HL	Hinge Lever
LHL	Long Hinge Lever
RL	Roller Lever
ARL	Adjustable Roller Lever
LRL	Large Roller Lever
LA	Lever Arm
CW	Cats Whisker
PSL	Plastic Spring Lever
SL	Spring Lever

## LSPS (all models) QUICK CONNECT:



Quick Connect (QC) M12 8 Way Male (on Flying Lead 250mm) (pin view from switch)	Switch Circuit
1 7	11/12
6 5	21/22
4 3	33/34 or 31/32

**Standards:** ISO14119 EN60947-5-1 EN60204-1  
ISO13849-1 EN62061 UL508

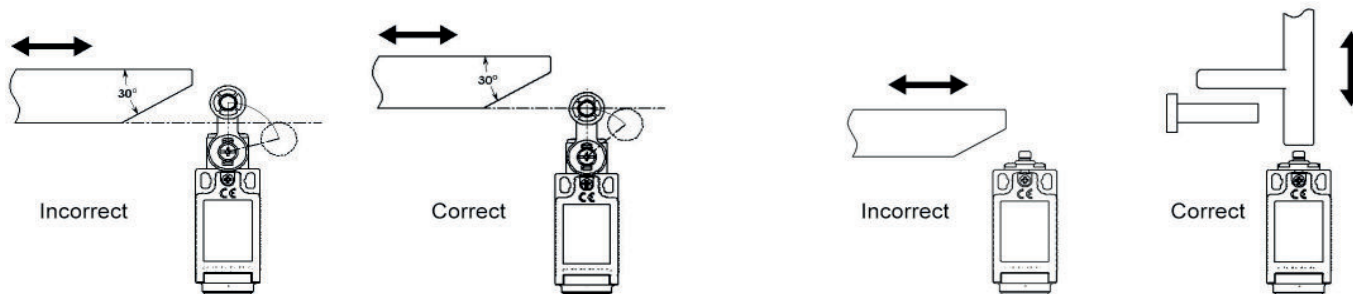
### Safety Classification and Reliability Data:

Mechanical Reliability B10d	2.5x10 <sup>6</sup> operations at 100mA load
ISO13849-1	Up to PLE depending upon system architecture
EN62061	Up to SIL3 depending upon system architecture
Safety Data - Annual Usage	8 cycles per hour/24 hours per day/365 days
	MTTFd 356 years
Utilisation Category	AC15 A300 240V 3A
Thermal Current (Ith)	10A
Rated Insulation Voltage	300Vac
Rated Impulse Withstand	2500Vac
Insulation Resistance	100MΩ min.
Maximum Switching Speed	250mm/sec
Case Material	UL approved glass-filled polyester
Roller Material	Various polyesters
Enclosure Protection	IP67
Operating Temperature	-25C to +80C
Mechanical Life Expectancy	5x10 <sup>6</sup> cycle min.
Vibration	IEC68-2-6 10-55Hz 0.35mm 1octave/min
Conduit Entry	M20 or 1.2"NPT

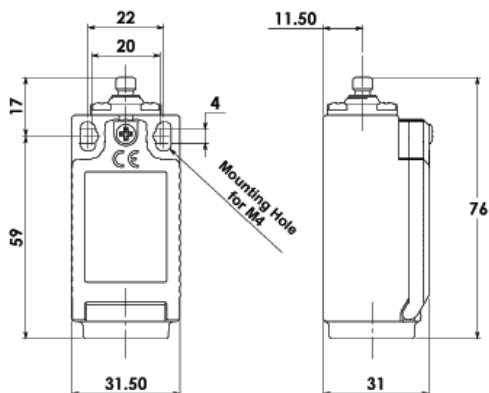
Gold Plated Contacts available for low power circuits (5V 5mA).  
Ordering: Add GC to Part Number e.g. 171001-GC

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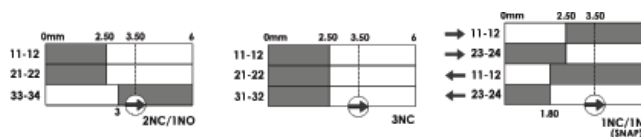
## OPERATION:



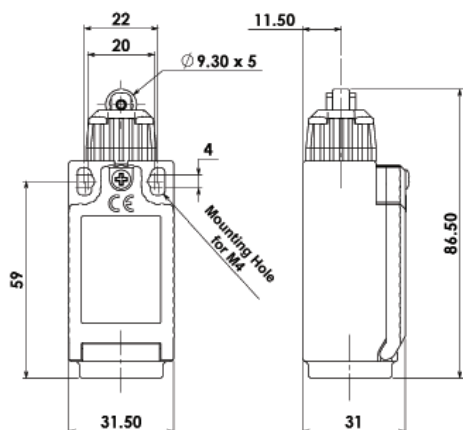
## LSPS PIN PLUNGER:



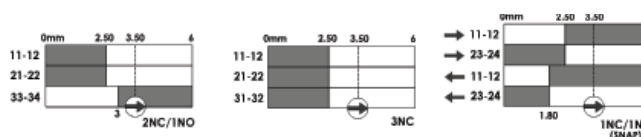
PIN PLUNGER	SALES NUMBERS		
Contacts	M20	1/2"NPT	QC12
2NC 1NO	171001	171002	171003
3NC	171004	171005	171006
1NC 1NO Snap	171007	171008	171009



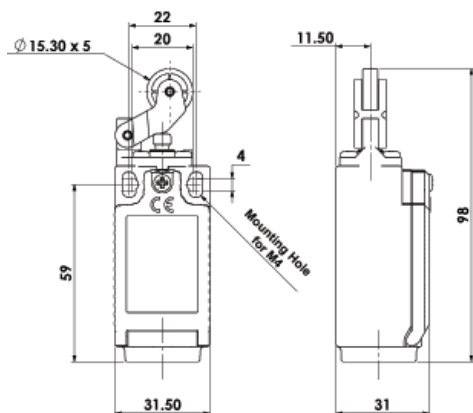
## LSPS ROLLER PLUNGER:



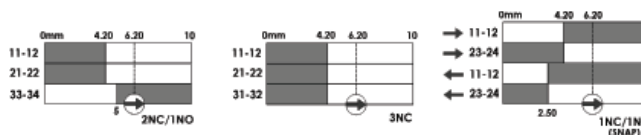
ROLLER PLUNGER	SALES NUMBERS		
Contacts	M20	1/2"NPT	QC12
2NC 1NO	171010	171011	171012
3NC	171013	171014	171015
1NC 1NO Snap	171016	171017	171018



## LSPS HINGE LEVER:



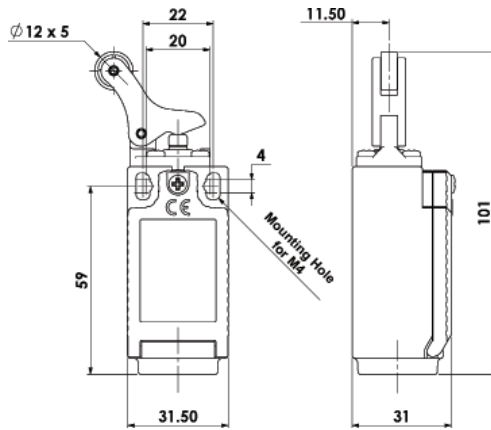
HINGE LEVER	SALES NUMBERS		
Contacts	M20	1/2"NPT	QC12
2NC 1NO	171019	171020	171021
3NC	171022	171023	171024
1NC 1NO Snap	171025	171026	171027



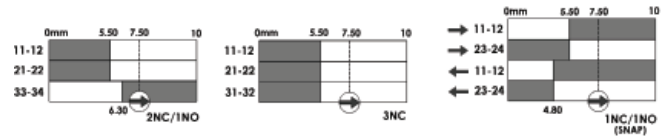
Gold Plated Contacts available for low power circuits (5V 5mA).  
Ordering: Add GC to Part Number e.g. 171001-GC

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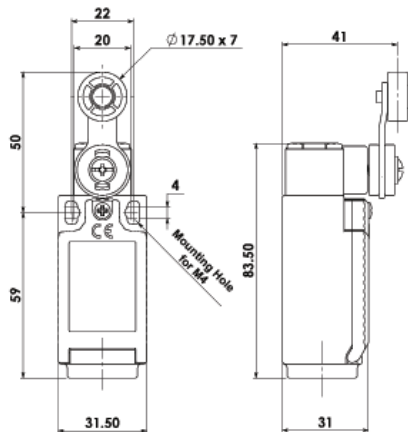
## LSPS LONG HINGE LEVER:



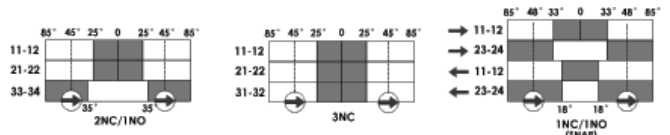
LONG HINGE LEVER	SALES NUMBERS		
Contacts	M20	1/2"NPT	QC12
2NC 1NO	171028	171029	171030
3NC	171031	171032	171033
1NC 1NO Snap	171034	171035	171036



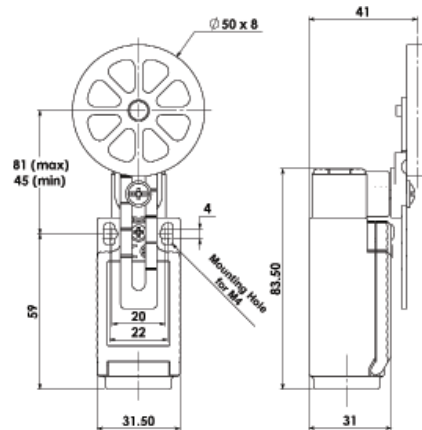
## LSPS ROLLER LEVER:



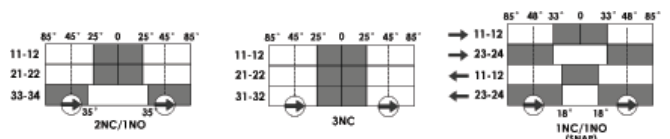
ROLLER LEVER	SALES NUMBERS		
Contacts	M20	1/2"NPT	QC12
2NC 1NO	171037	171038	171039
3NC	171040	171041	171042
1NC 1NO Snap	171043	171044	171045



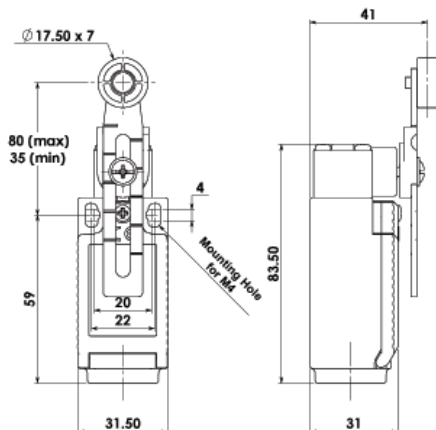
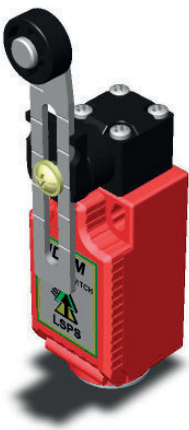
## LSPS LARGE ROLLER LEVER:



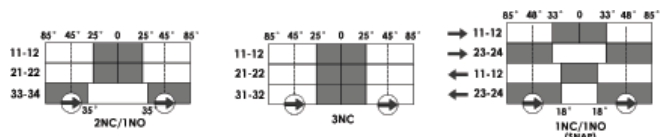
LARGE ROLLER LEVER	SALES NUMBERS		
Contacts	M20	1/2"NPT	QC12
2NC 1NO	171046	171047	171048
3NC	171049	171050	171051
1NC 1NO Snap	171052	171053	171054



## LSPS ADJUSTABLE ROLLER LEVER:



ADJUSTABLE ROLLER LEVER	SALES NUMBERS		
Contacts	M20	1/2"NPT	QC12
2NC 1NO	171055	171056	171057
3NC	171058	171059	171060
1NC 1NO Snap	171061	171062	171063

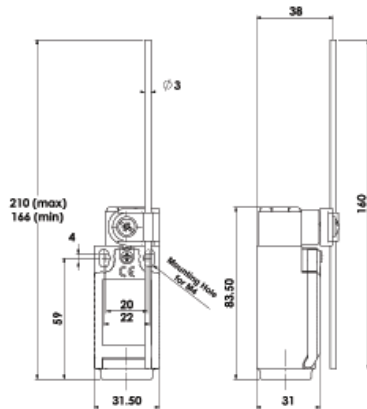


Gold Plated Contacts available for low power circuits (5V 5mA).  
Ordering: Add GC to Part Number e.g. 171028-GC

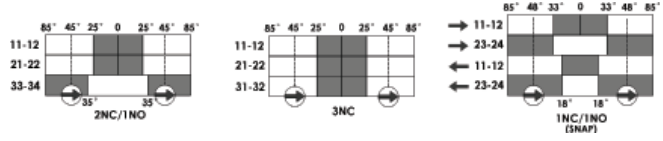
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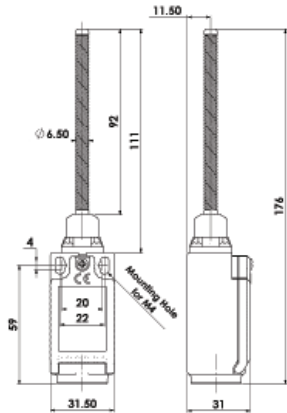
## LSPS LEVER ARM:



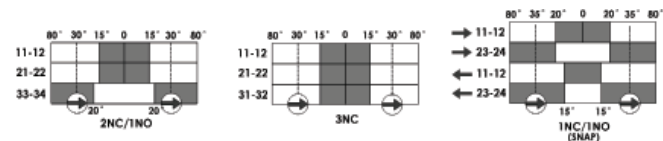
LEVER ARM	SALES NUMBERS		
Contacts	M20	1/2"NPT	QC12
2NC 1NO	171064	171065	171066
3NC	171067	171068	171069
1NC 1NO Snap	171070	171071	171072



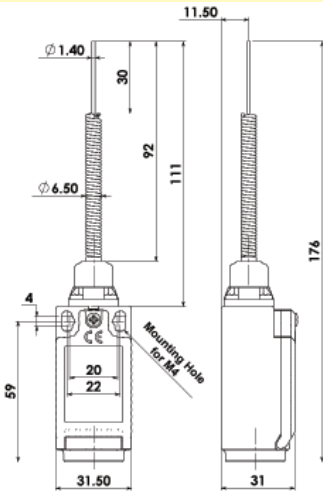
## LSPS SPRING LEVER:



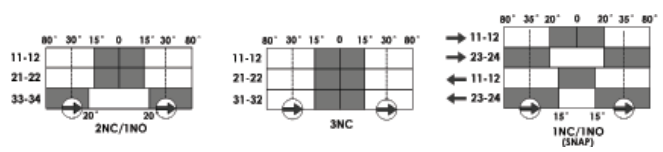
SPRING LEVER	SALES NUMBERS		
Contacts	M20	1/2"NPT	QC12
2NC 1NO	171091	171092	171093
3NC	171094	171095	171096
1NC 1NO Snap	171097	171098	171099



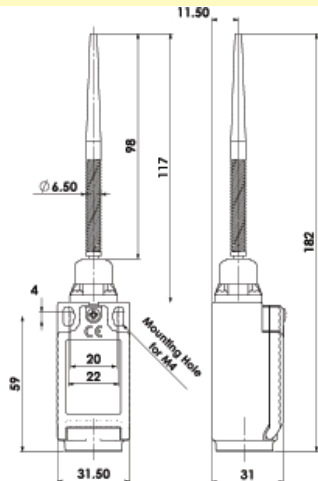
## LSPS CATS WHISKER:



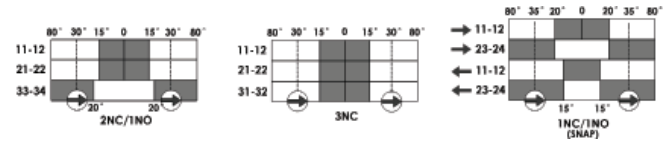
CATS WHISKER	SALES NUMBERS		
Contacts	M20	1/2"NPT	QC12
2NC 1NO	171073	171074	171075
3NC	171076	171077	171078
1NC 1NO Snap	171079	171080	171081



## LSPS PLASTIC SPRING LEVER:



PLASTIC SPRING LEVER	SALES NUMBERS		
Contacts	M20	1/2"NPT	QC12
2NC 1NO	171082	171083	171084
3NC	171085	171086	171087
1NC 1NO Snap	171088	171089	171090



Gold Plated Contacts available for low power circuits (5V 5mA).  
Ordering: Add GC to Part Number e.g. 171064-GC

# Safety Limit Switches Type: LSPS-R (Plastic Body with Reset)



PP-R

RP-R

HL-R

LHL-R

RL-R

ARL-R

LRL-R

LA-R

## FEATURES:

- Lockable head mechanism
- Requires manual reset after the lock has been engaged
- Positive opening safety contacts to EN60947-5-1
- Extensive choice of 8 actuator heads - linear or rotary actions
- Head position adjustment any of 4 positions
- Enclosure protection to IP67 - suitable for washdown
- Conduit entries: M20, 1/2"NPT or QC (Quick Connect)

## ACTUATOR TYPES:

- PP-R Pin Plunger  
 RP-R Roller Plunger  
 HL-R Hinge Lever  
 LHL-R Long Hinge Lever  
 RL-R Roller Lever  
 ARL-R Adjustable Roller Lever  
 LRL-R Large Roller Lever  
 LA-R Lever Arm

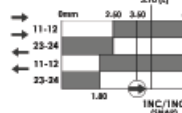
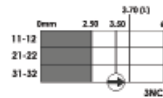
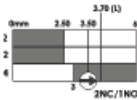
## CONTACT BLOCKS:

- 2NC 1NO Slow Break  
 3NC Slow Break  
 1NC 1NO Snap Action

## CONDUIT ENTRY:

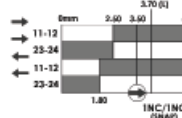
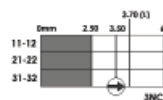
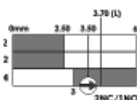
- M M20 version  
 N 1/2" NPT version  
 Q Quick Connect version

## LSPS-R PIN PLUNGER WITH RESET:



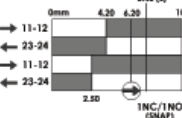
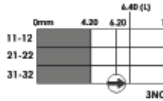
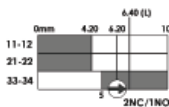
PIN PLUNGER WITH RESET	SALES NUMBERS		
Contacts	M20	1/2"NPT	QC12
2NC 1NO	173001	173002	173003
3NC	173004	173005	173006
1NC 1NO Snap	173007	173008	173009

## LSPS-R ROLLER PLUNGER WITH RESET:



ROLLER PLUNGER WITH RESET	SALES NUMBERS		
Contacts	M20	1/2"NPT	QC12
2NC 1NO	173010	173011	173012
3NC	173013	173014	173015
1NC 1NO Snap	173016	173017	173018

## LSPS-R HINGE LEVER WITH RESET:

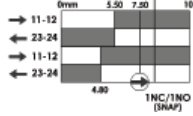
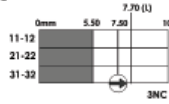
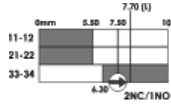


HINGE LEVER WITH RESET	SALES NUMBERS		
Contacts	M20	1/2"NPT	QC12
2NC 1NO	173019	173020	173021
3NC	173022	173023	173024
1NC 1NO Snap	173025	173026	173027

# Safety Limit Switches Type: LSPS-R (Plastic Body with Reset)

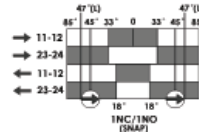
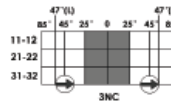
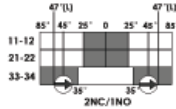


## LSPS-R LONG HINGE LEVER WITH RESET:



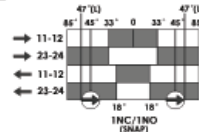
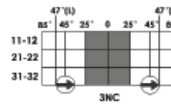
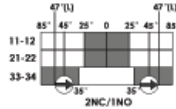
LONG HINGE LEVER WITH RESET	SALES NUMBERS		
Contacts	M20	1/2"NPT	QC12
2NC 1NO	173028	173029	173030
3NC	173031	173032	173033
1NC 1NO Snap	173034	173035	173036

## LSPS-R ROLLER LEVER WITH RESET:



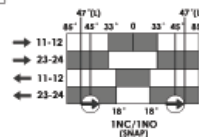
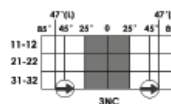
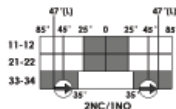
ROLLER LEVER WITH RESET	SALES NUMBERS		
Contacts	M20	1/2"NPT	QC12
2NC 1NO	173037	173038	173039
3NC	173040	173041	173042
1NC 1NO Snap	173043	173044	173045

## LSPS-R LARGE ROLLER LEVER WITH RESET:



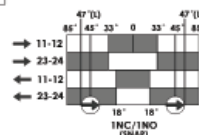
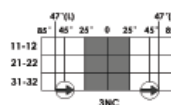
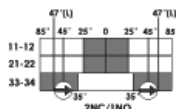
LARGE ROLLER LEVER RESET	SALES NUMBERS		
Contacts	M20	1/2"NPT	QC12
2NC 1NO	173046	173047	173048
3NC	173049	173050	173051
1NC 1NO Snap	173052	173053	173054

## LSPS-R ADJUSTABLE ROLLER LEVER WITH RESET:



ADJUSTABLE ROLLER LEVER RESET	SALES NUMBERS		
Contacts	M20	1/2"NPT	QC12
2NC 1NO	173055	173056	173057
3NC	173058	173059	173060
1NC 1NO Snap	173061	173062	173063

## LSPS-R LEVER ARM WITH RESET:



LEVER ARM RESET	SALES NUMBERS		
Contacts	M20	1/2"NPT	QC12
2NC 1NO	173064	173065	173066
3NC	173067	173068	173069
1NC 1NO Snap	173070	173071	173072